

# Russian Food Processing Modernizes as It Opens to the World Market

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**T**he introduction of market-oriented economic reforms following the breakup of the Soviet Union in 1992 initially resulted in sharp declines in Russia's food production, while liberalization of foreign trade encouraged greater imports of processed foods into Russia. Further progress on economic reforms could result in a more modern, efficient, and competitive food industry in Russia over the next 10 to 20 years, resulting in new opportunities for food processing firms seeking to export to or invest in Russia.

## Food Processing Sector Contracts Sharply

With over 8,000 plants, Russia's food processing sector can satisfy only about 50-80 percent of domestic needs for major food products. This is due partly to large declines in output and more extensive onfarm processing (which bypasses food plants).

The quantity of food produced fell nearly in half between 1990 and 1995, as output of virtually every processed food declined substantially, ranging from 90 percent for concentrated foods, such as dried

soups and fruit juices, to 16 percent for granulated sugar (table 1). No major food product showed an increase in output between 1990 and 1995.

Reasons for these declines include higher prices and lower incomes reducing demand for many foods, increasingly obsolete production facilities as investment collapsed, shortages of affordable inputs, lower waste as higher prices encourage conservation, and increased competition from imported foods. While all these factors have contributed to Russian food processing declines, the most important one has been lower demand resulting from higher food prices and lower incomes.

### *Reduced Demand From Falling Incomes*

Lower real incomes (after adjusting for inflation) for many Russians and higher food prices since the breakup of the Soviet Union have significantly reduced demand for many foods, particularly meat, milk and dairy products, fruits, vegetables, fish, sugar, and vegetable oil. While many recent reports in the Russian media imply that lower incomes have reduced total food consumption dramatically, official Russian Government statistics (gathered through household surveys) show

that the average daily intake actually declined about 8 percent from 2,523 calories in 1991 to 2,310 calories in 1995. Wider gaps in income, however, have resulted in a larger decline in food consumption by the poorer segments of society (see box on Russian income and food consumption).

The real change has come in the mix of foods in the typical Russian's diet, as lower incomes necessitate increased consumption of cheaper foods, like bread and potatoes, and reduced consumption of meat, fish, and other more expensive foods (fig. 1). Moreover, it has taken an ever larger share of a Russian family's expenditures to afford a basic basket of foodstuffs. In 1990, 36 percent of family expenditures went to pay for food (compared with 11 percent for U.S. households in 1993). By 1995, this share had risen to more than 50 percent.

### *Obsolete Production Capacity*

Russia's food processing sector is plagued by old and inefficient equipment and machinery. A large portion of machinery currently in use is more than a decade old. In fact, 60 percent of Russian sugar refineries were constructed at least 25 years ago. Investment in new machinery and equipment declined

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Table 1

**Output of Russia's Food Processing Sector Fell Across the Board**

Item	Output				Change, 1995/90
	1990	1992	1994	1995	
<i>1,000 metric tons</i>					<i>Percent</i>
Bread and bread products	18,242	15,932	12,300	10,900	-40
Butter	833	762	488	419	-50
Canned goods	8,206	5,353	2,451	2,145	-74
Fruits and vegetables	4,449	2,950	1,323	NA	NA
Meat, milk, and other	3,757	2,403	1,128	NA	NA
Cheese	458	299	271	217	-53
Concentrates <sup>1</sup>	135	48	17	13	-90
Confectionery products <sup>2</sup>	2,869	1,829	1,530	1,339	-53
Flour <sup>3</sup>	22,570	21,644	15,800	14,000	-38
Granulated sugar <sup>4</sup>	3,758	3,923	2,711	3,146	-16
Margarine	808	560	278	198	-76
Milk and dairy	20,786	9,788	7,200	5,437	-74
Noodles and pasta	1,038	1,100	666	587	-43
Processed meat <sup>5</sup>	6,629	4,784	3,283	2,490	-62
Sausage	2,283	1,482	1,455	1,267	-45
Vegetable oil	1,159	994	909	773	-33
<i>Million decaliters</i>					<i>Percent</i>
Beer	336.0	279.0	207.0	177.0	-47
Vodka	138.0	152.0	122.0	122.0	-12
Wine	75.7	39.8	15.6	11.6	-85

Notes: NA = Not available. <sup>1</sup>Includes dried soups, breakfast cereals, fruit juices, and spices. <sup>2</sup>100 percent from State sugar enterprises. <sup>3</sup>From domestic raw materials only. <sup>4</sup>Domestic production from beets and raw (cane) sugar. <sup>5</sup>Primary subproducts only. Includes liver, kidneys, brain, diaphragm, and tail of cattle, sheep, and goats. Sources: Russian Statistical Yearbook (1994), Russian Agricultural Yearbook (1995), Interfax Food and Agriculture Report (various issues), CIS Statistical Committee, "The Socioeconomic Situation in the CIS During January-September 1995," Russian Statistical Committee "Socioeconomic Conditions of Russia in 1995."

since the 1980's, and collapsed since 1990 as Russian Government resources dried up and the fledgling private sector failed to fill the investment void. High Russian interest rates and payments in arrears further contributed to the collapse. Failure to invest and modernize means that existing production facilities have become more obsolete. Some cannot be used to their full capacity even if demand existed (table 2).

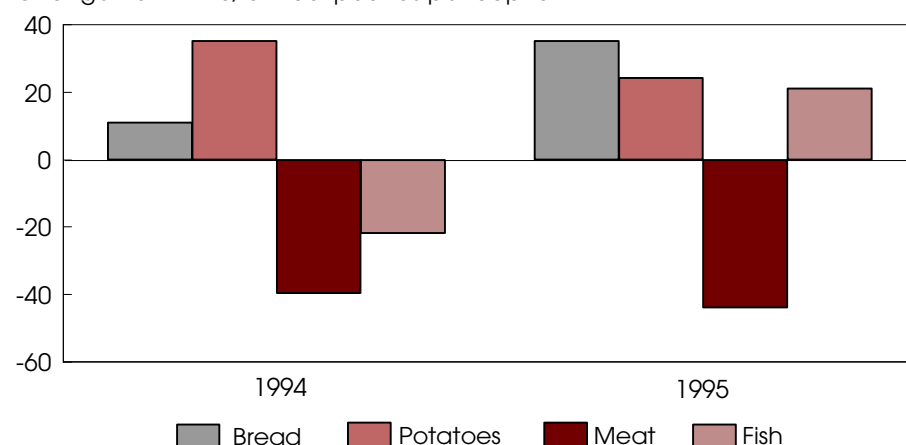
**Problems With Inputs**

Much of Russia's food processing sector reports problems with inputs that range from reduced supplies of agricultural raw materials, to a lack of quality packaging, to more expensive energy and other operating

Figure 1

**Lower Incomes Depress Russian Meat and Fish Consumption**

Change from 1990, annual pounds per capita



Source: CIS Statistical Committee.

## Russian Incomes and Food Consumption Growing More Disparate

Today, almost 47 percent of income in Russia is earned by only 20 percent of families. The share of the population with incomes falling below the official poverty level (about \$36 per month) has tripled, from 10 percent in the mid-1980's, to a third of the population in 1993 and 1994, but declining to 25 percent in 1996.

Data from household budget surveys sharpen our picture of the changes in food consumption by Russian families, many of them much poorer or much richer than before the late 1980's when the reforms began. In 1994, families with incomes five times the poverty level spent about 20 percent of their income on food, while families with incomes at half the poverty level spent more than half their incomes on food—up considerably from what it was before the breakup of the Soviet Union.

From 1994 to 1995, the consumption of dairy products fell for all income groups, while consumption of potatoes and grain products continued slightly upward. Consumption of vegetables and vegetable oil rose for all income groups, and fruit consumption for most. Vegetable oil is being substituted for more expensive butter. Consumption of eggs, a

cheaper protein source than meat, fell by much less than meat.

For the more affluent, the increase in vegetable and fruit consumption has been more pronounced due to their ability to afford the better quality and seasonal assortment that has been made available recently (see table below). Also, despite higher meat prices, the more affluent maintained meat consumption at 1994 levels (roughly 132 pounds annually). In 1995, families in the top 10 percent of the income distribution who consumed over 200 pounds of meat per capita in 1994 reduced their meat consumption by nearly 20 percent. Their diets have come to more closely resemble those in the United States and Western Europe.

Per capita consumption for the 10 percent of the population with the lowest household incomes was 69 pounds of meat, 378 pounds of milk (and products), and 132 eggs annually. Despite concerns raised by some in Russia about the lower consumption of livestock products by low-income households, this intake of eggs and milk is similar to average consumption levels in a middle-income country like Turkey where per capita consumption of meat is about 40

pounds. Specific scientifically designed consumption surveys—which also incorporate body weight measurements and monitor the incidence of disease related to malnutrition—also indicate that the Russian population is still well fed. The concern is for special cases of the very poor—single-parent families with many children, disabled heads of household, and others—who have trouble stretching their incomes to match new higher prices.

The re-emerging Communist Party advocates a return to subsidies and control of retail food prices and food processing profit margins. But despite painful required adjustments, reform has ended lines at foodstores, encouraged better food quality and assortment, and generally imposed economic discipline on the Russian food system.

While it is important to address concerns about proper nutrition among the poor, international agencies recommend targeted programs for the poor, such as food assistance and nutrition education programs, instead of an attempted return to the past.

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### Russian Families Adjust Their Food Purchases to New Prices

Product	Average			Decile of the income distribution					
	1993	1994	1995	Bottom 10 percent			Top 10 percent		
				1993	1994	1995	1993	1994	1995
	<i>Pounds per capita</i>								
Grain products	236.3	222.2	221.5	251.4	190.5	193.2	209.5	233.7	275.6
Potato products	247.5	247.9	247.3	264.6	227.6	222.3	249.2	275.6	299.9
Vegetables and squash	167.9	155.3	183.3	103.2	105.8	127.0	185.2	209.5	269.0
Fruits and berries	68.0	66.7	66.0	23.8	37.0	34.4	92.6	101.4	110.3
Meat and products	125.2	127.6	115.5	92.6	82.0	68.8	156.6	222.7	183.0
Dairy products	671.2	669.9	542.5	539.8	497.4	378.4	714.4	811.4	785.0
Eggs (unit)	236	210	196	132	156	132	252	264	264
Fish and products	24.1	19.6	19.8	5.3	10.6	10.6	34.4	29.1	31.8
Sugar and candy	64.0	62.7	60.5	39.7	45.0	42.3	82.0	76.7	84.7
Vegetable oil	16.3	12.5	14.1	NA	7.9	10.6	NA	13.2	18.5

Notes: NA = Not available. Source: *Russian Federation Statistical Committee*. Budget survey data are a new source of information for market research in Russia, matching household characteristics with food consumption. These data are particularly useful, since the system for collecting traditional food disappearance data from state enterprises is deteriorating and trade among the countries of the former Soviet Union and private food production is widely thought to be undercounted. For 1995, budget survey data indicate that vegetable and vegetable oil consumption were 19 and 13 percent more, and grain and potato consumption were 25 and 12 percent less, than traditional data indicate.

Table 2

**Russian Milk and Dairy Production at Only 35 Percent of Capacity in 1993**

Food product	Total production	Total capacity	Capacity utilization
	1,000 metric tons		Percent
Canned fruits and vegetables	2,500	5,570	45
Confectionery products	1,746	2,925	60
Granulated sugar	3,918	6,500	60
Milk and dairy products	8,398	24,000	35
Processed meat	4,099	8,200	50
Vegetable oil	1,127	2,250	50

Sources: Various issues of Interfax Food and Agriculture Report and the British Broadcasting Corporation's Summary of World Broadcasts.

costs. Most of Russia's food processing technology was designed and built with the assumption of cheap energy. However, energy prices have risen sharply in recent years.

The disruption of trade among former Soviet countries following the breakup of the Soviet Union resulted in reduced supplies of raw sugar for refining from Ukraine, lower supplies of meat and livestock products from Belarus, and reduced grain supplies coming from Kazakhstan and Ukraine for flour mills. These and numerous other shortages of raw materials contributed to declines in output of many processed foods. Reduced grain harvests and lower production of other agricultural raw materials in many former Soviet Union countries over the past 3-5 years exacerbated shortages of inputs.

### **Reduction of Waste**

During the Soviet era, considerable amounts of food were wasted because there was no incentive to conserve. For example, the very low price of bread encouraged consumers to throw away large quantities of edible bread as they bought fresh bread almost every day. Bread was also fed to livestock, since it was cheaper and more plentiful than

traditional feeds such as barley, corn, and mixed feed. Since massive subsidies which kept Russian bread and other food prices artificially low began to be phased out in 1992, bread prices (in dollar terms) rose from about a penny a loaf in 1991 to about 35 cents by early 1996. Such dramatic price hikes eliminated the feeding of bread to livestock and reduced the amount of bread which Russians throw away. Thus, reduced waste has contributed to food production declines in Russia by further depressing demand.

### **Increased Competition From Imports**

Liberalization of Russian foreign trade after the demise of the Soviet Union sharply increased imports of many food products, as emerging private traders in Russia sought to capitalize on consumers' tastes. In 1994, for example, Russian imports of frozen meat rose 35 percent, butter 68 percent, and vegetable oil 270 percent. Now a leading import item, processed foods accounted for about 30 percent of Russian imports in both 1994 and 1995.

Strong growth in Russian processed food imports is impressive given the overall decline in Russian food demand discussed above and reflects shifting consump-

tion patterns by certain segments of the population. Demand for imports has been fueled by wealthier Russians' desire for higher quality and more convenient foods. Exchange rate developments helped as well. Although real (adjusted for inflation) incomes fell in recent years, considerable strengthening of the ruble against the dollar since 1992 increased the dollar value of average Russian wages from less than \$30 per month in 1992 to an average of more than \$100 a month during the second half of 1995. This increased the average Russian's demand for imported foods, even at a time of falling real incomes in real ruble terms.

U.S. companies are among the benefactors of such trade, with many brands penetrating the Russian market in a very short time. The growing importance of private traders, which are now responsible for the bulk of processed food imports in Russia, has provided an easier way for new, foreign brands to enter the Russian market. Successful promotion and marketing of many U.S. brands also have been instrumental. American candy bars and other snack foods, virtually unknown in Russia until the early 1990's, are now sold in many Russian cities and have gained market share despite falling incomes. Poultry exporters have found new markets in Russia in recent years, particularly for dark meat parts which are less sought after in the United States than in Russia (see "Will the Surge Continue in Russia's HVP Imports?" elsewhere in this issue). And Coca-Cola has pulled virtually even with Pepsi on Russia's expanding soft drink market despite Pepsi's decades-long domination of the Soviet market.

### **Recovery May Be Near**

While 1995 brought a further decline in Russia's food processing sector, it also brought some indications

of a future turnaround. The 6-percent decline in output in 1995 was less steep than in previous years. Production of certain products, including sugar and nonalcoholic beverages, posted a modest gain. Declines in value terms, while not reported in Russian statistics, are likely less sharp than quantity declines, since many food processors raised output quality and prices of their remaining production. Some processors also recently expanded output of more highly processed foods, such as specialty meats and baby food. Qualitative improvements in the sector continued in 1995 as higher quality Russian foods with better packaging competed with imported foods. Foreign investment in Russian food processing gained momentum in 1995 with a number of high-profile deals and dozens of smaller projects.

Recovery in Russian food processing output will likely begin within the next few years, accompanying overall industrial recovery. The precise timing and strength of the recovery will depend on economic factors, such as the pace and scope of economic reforms, whether most of the investment deals announced to date (many of which include Western partners) actually occur, and whether consumers' incomes show

strong gains in the first years of economic recovery.

To gain some idea of how recovery in Russian food processing might look in the next few years, we can look at the experience of Poland, which is in the fifth year of a strong recovery as a result of radical economic reforms. In 1992, the first year of Polish economic recovery, food processing lagged behind other more export-oriented branches of industry, such as furniture and wood products, rubber and plastics, and metal products. Beginning in 1993, however, demand recovered, contributing to above-average gains for food processing—8.6-percent growth versus 6.4-percent growth for overall industrial production. If that is any indicator, recovery of the food processing sector in Russia will depend heavily on increasing consumer incomes and could begin after a recovery of export-oriented industries.

As Russian incomes begin to recover, the population is likely to reduce consumption of cheaper foods and increase consumption of meat, fish, and specialty beverages and snack foods. (At the same time, a portion of the income rise could also be shifted to nonfood consumer goods, such as household electronics and clothing.) There also likely will

be greater emphasis on more convenience foods (such as chicken parts rather than whole chickens) and semiprepared foods, such as mixes, concentrates, and frozen items. At the same time, the greater disparity in incomes will spawn a more diverse market for food and nonfood consumer products. While affluent Russians will increase demand for higher priced and more processed foods, many imported from the West, less affluent Russians will continue to consume a diet heavily weighted toward less expensive animal fats and starches, such as potatoes.

## Investment Opportunities for Foreign Firms

Investment in building new Russian food processing plants or modernizing and upgrading existing ones may gain momentum in the late 1990's and could fuel a strong recovery beginning around the year 2000. Poland's recovering economy of nearly 40 million consumers has been a magnet for consumer-oriented investment.

A key factor driving the recovery of Poland's food sector—entry of many new private firms—is largely absent in Russia given the less favorable conditions there for new

Table 3

### Coca-Cola and Mars Are Leading U.S. Investors in Russia's Food Sector

U.S. firm name	Key products	Approximate investment (as of 1995)	Planned future investment	Total planned investment
<i>Million U.S. dollars</i>				
Coca-Cola	Soft drinks	250	250	500
Heinz	Baby food, ketchup, confectionery	15+	25+	40+
Mars	Candy bars, pet food, sauces	100+	100+	200+
Pepsi	Soft drinks	40	550	590
Philip Morris (including Kraft Jacobs Suchard)	Confectionery, tobacco	25	60	85
RJR International	Tobacco	50+	50+	100+
Total of above		480+	1035+	1515+

Sources: Various issues of Interfax Food and Agriculture Report, OMRI Daily Report, AgraEurope.



business start-up. Over the past 2 years, more investment deals for Russia's aging food production facilities have been announced or completed. Some are quite large (worth \$25 million or greater) and involve Western capital (such as the construction of a modern candy plant by Mars near Moscow at a cost of

more than \$100 million, see box on the confectionery sector).

A number of U.S. food processors have found attractive investment opportunities in Russia (table 3). Besides Mars, other noteworthy investors in Russian food processing include Coca-Cola (soft drinks), Heinz (baby food and ketchup),

Pepsi (soft drinks), Philip Morris (confectionery and tobacco), and RJR International (tobacco). In April 1996, Pepsi announced an ambitious \$550 million Russian investment program over the next 5 years. Together, these six firms have invested nearly \$0.5 billion in Russia.

Planned future projects could bring

## Mars and Red October: Highlight on the Confectionery Sector

Change is coming fast to Russian confectionery production. This is reflected by the experience of one foreign investor, Mars, Inc., and one local firm, Red October.

The confectionery sector in Russia is a logical beginning for change in the country's food processing sector. Russia had one of the highest rates of per capita sugar consumption during the 1980's. While per capita sugar consumption has fallen in the 1990's, the quality of confectionery products consumed has increased. Imported candy bars and other confectionery products made rapid inroads into Russia's market after liberalization in the early 1990's. As in Poland, the confectionery sector in Russia has been one of the first sectors of the food industry to attract large-scale foreign investment.

Until the early 1990's, Russia's candy sector was noted for poor quality, drab packaging, narrow product range, and frequent shortages. Now, a wide variety of confectionery products is available from stores and kiosks on virtually every street corner in major Russian cities. While many of the more attractively packaged candy bars are Western imports, Russian candy makers, personified by Red October, are fighting back with higher quality, better packaged, and more aggressively marketed products.

### Mars—From Exporter to Major Investor

Exporting modest amounts of candy bars to the former Soviet

Union, Mars' business took off following the breakup of the Soviet Union. Mars was able to gain a strong foothold in the Russian candy bar market in the early 1990's through widespread advertising campaigns. By 1994, it captured about 35 percent of the Russian market for chocolate bars and, according to an estimate published in the *Economist*, sold \$450 million worth of confectionery products and pet foods. (Mars views its pet food prospects in Russia as equally promising as its candy sales.)

Because its export business had grown so large, Mars sought to produce directly in Russia to reduce costs and increase market share. Rather than acquire an existing facility, it built a large production complex in 1994 at Stupino (near Moscow) at a cost of more than \$120 million. The complex has an initial annual capacity of 50,000 tons of chocolate bars, 30,000 tons of various sauces, and 50,000 tons of pet food.

Mars reportedly cooperated closely with Russian machinery plants in equipping its new Stupino complex; it also intends to eventually buy up to 85 percent of the inputs needed at the Stupino plant from within Russia. The close cooperation with the Russian Government, along with the large size of the investment deal and its positive impact on the Russian economy, contributed to the firm winning a 50-percent cut in customs tariffs on imported materials for its operations.

### Red October Fights Back

The market share of Red October of Moscow, a leading Russian candy producer, shrank in recent years as a result of greater competition from imports and reduced exports to markets in the former Soviet Union. Following several tough years, Red October is winning back some of its lost market share thanks to aggressive investment and marketing, which surprisingly does not include a major foreign investor. Red October reportedly bought \$35 million worth of foreign (mainly Western) equipment in 1995 and planned similar expenditures on modernization for 1996.

Red October's plans for expansion include boosting output of its most popular chocolates, beginning output of salted peanuts, and building a new factory near Moscow. Red October's expansion was aimed to increase total production by a third from about 60,000 tons in 1995 to 80,000 tons in 1996. It diversified geographically out of Moscow to regional operations in Central and Far Eastern Russia. Red October is building its own marketing network, with four confectionery stores already open in the Moscow region, and another 15-20 scheduled for the future.

The firm is financing investment largely out of its own resources and from multiple share offerings. It fought off a hostile takeover bid in 1995 by a Russian entity and has sought to prevent future takeover attempts by selling a 20-percent stake to the Moscow City Government.

their total investment to \$1.5 billion or greater. Their ranks could swell if Russia's economic recovery gains steam in coming years.

The greatest number of investment deals, however, are valued at much less than \$25 million and involve purchases of new equipment or upgrades to existing plants. Much of the new machinery and equipment bought by Russian food processing firms comes from the West, providing attractive opportunities for U.S., Western European, and other foreign suppliers. Moreover, as these Russian firms modernize on their own, they could become attractive investment targets in coming years.

## **Export Opportunities as Well**

Russian food imports are expected to remain sizable in the next 3-5 years, and are likely to favor high-value processed foods over bulk commodities like grain. While modernization and recovery of the food processing sector could reduce demand for some imports of basic foods like sugar and butter, rising incomes and diversification of diets among the more affluent will raise demand for Western brand-name foods, including convenience and

luxury foods. In the late 1990's, many of the firms that just entered the Russian market will likely deepen their penetration, while new brands will enter.

Segments of food processing which have already seen the highest exports and foreign investment should continue to offer attractive opportunities. On the trade side, they include meat, vegetable oil, candy and snacks, cheese, yogurt, specialty products such as pet foods and baby foods, beverages, and tropical fruits. The most attractive investment targets to date have included beer, soft drinks and other nonalcoholic beverages, candy and snacks, sauces, and dried foods. Reasons for their success include high profit margins on some goods (such as spirits and beer) and high expansion opportunities on other foods (such as soft drinks, candy, and dried foods) that are less expensive and more affordable to a larger portion of the population.

Several other segments of food processing will likely offer attractive opportunities in coming years. For instance, coffee consumption is growing in this land of traditional tea drinkers, and coffee exports to Russia could rise substantially in coming years. Imports of food concentrates, including soups, breakfast cereals, fruit drinks, and spices, could also grow as Russian consumers increase demand for more

convenient foods in the face of declining domestic production. (Russian output collapsed from 134,500 tons of concentrated foods in 1990 to 22,700 tons in 1994, and many Russian food concentrate factories verge on bankruptcy.) Fruit and vegetable processing (including juice production), a traditionally weak area of Russian food processing, will likely see increased activity in coming years as rising incomes allow Russians to consume more fruits and vegetables.

Demand for mineral water is likely to rise rapidly as incomes recover, particularly in light of the poor quality of drinking water in many regions of Russia. Packaging and bottling facilities are another sphere of activity which will become increasingly attractive as Russian food and beverage producers seek upgraded packaging as a means of reducing costs, increasing shelf-life, and competing with Western products.

Despite political and economic instability, Russia's food sector has offered attractive opportunities to foreign food processing firms. If economic reforms continue and widen their positive impact on the economy, they could open even more attractive business opportunities for exporters and investors in the coming decade. ■